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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,727	10/06/2006	Heather Knowles	US040179	3318

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EXAMINER

ROZANSKI, MICHAEL T

ART UNIT	PAPER NUMBER
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3768

MAIL DATE	DELIVERY MODE
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07/21/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/599,727	Applicant(s) KNOWLES ET AL.	
	Examiner MICHAEL ROZANSKI	Art Unit 3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8 and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakamura et al (US 5,469,852).

Nakamura et al disclose an ultrasound diagnostic probe 15 to be inserted transesophageally into an upper digestive tract. Probe includes housing 50 with seams located at abutting edges of the acoustic window 44 (see Figure 3a) and a transducer array 20 that is divided into a plurality of piezoelectric elements, each emitting ultrasound waves in a plane perpendicular to the surface of the array (col 5, lines 16-36). An acoustic matching layer 38 covers the entire active plane (arranged between conductive parts and seam) of the transducer so as to acoustically influence waves transmitted and received by the transducer in a desired manner. Furthermore, the outer surface of element 34 is molded by epoxy resin, for example, to form a waterproof case 50 (col 6, lines 16-28).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al as applied to claim 1 in view of Tone et al (US 4,523,122).

Nakamura et al teach of an acoustic matching layer but not one specifically made of polyolefin. In the same field of endeavor, Tone et al teach of an acoustic matching layer made of polyolefin, which has known propagation properties (col 5, lines 32-45). It would have been obvious to the skill artisan to modify the layer of Nakamura, to be made of polyolefin as taught by Tone et al, because the acoustic propagation properties through the material are well known (col 5, lines 32-45).

Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al in view of Tanaka et al (US 5,368,036).

Nakamura substantially describes all features of the current invention as described above including an acoustic matching layer between electrically conductive parts and the seams. However, the acoustic matching layer is between conductive parts and the seams, but is not wrapped around the conductive parts as claimed. In the same field of endeavor, Tanaka et al teach of an ultrasound probe with transducer 10 and end cap 15, which is an acoustic matching layer (col 5, lines 19-39; see figure 2). It

would have been obvious to the skilled artisan to replace the acoustic matching layer of Nakamura, with a matching layer that wraps around the conductive parts as taught by Tanaka et al, in order to protect the electrically conductive parts of the probe.

Claims 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al or Nakamura/Tanaka as applied to claims 1 and 13 in view of Ito et al (US 5,886,454).

Nakamura et al or Nakamura/Tanaka teach of an acoustic matching layer but not one specifically made of polyurethane. In the same field of endeavor, Ito et al teach of an acoustic matching layer 4 made of polyurethane resin, which has known propagation properties (col 4, lines 20-52). It would have been obvious to the skill artisan to modify the layer to be made of polyurethane as taught by Ito et al, because the acoustic propagation properties through the material are well known (col 4, lines 20-52).

Response to Arguments

Applicant's arguments filed 5/1/08 with respect to independent claim 1 have been fully considered but they are not persuasive. Applicant argues that Nakamura et al do not disclose seams or an acoustic matching layer between seams and the conductive parts. However, the Office Action clearly sets forth that Nakamura et al disclose housing 50 with seams located at abutting edges of the acoustic window 44 (see Figure 3a). In other words, the seams are located in between the edges of the acoustic window and the housing. Further, the matching layer 38 is considered to be between

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the seams and the conductive parts, and is also considered to be between all elements located 'below' the matching layer in figure 3A.

Applicant's arguments with respect to claims 13-17 have been considered but are moot in view of the new ground(s) of rejection. Nakamura et al do not disclose that the matching layer is 'wrapped around' the conductive parts. For this reason, this action is made Non-Final.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Rozanski whose telephone number is 571-272-1648. The examiner can normally be reached on Monday - Friday, 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eric F Winakur/
Primary Examiner, Art Unit 3768

MR